UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte ROBERT KOPETZKY, ROLAND SCHNABL, ANDREAS WENGERT
GUNTER MAIERHOFER and DIETER BECK

Appeal No. 2006-0599
Application 10/076,270

ON BRIEF

Before FRANKFORT, OWENS and BAHR, Administrative Patent Judges.

FRANKFORT, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 11 through 20, all of the claims remaining in the application. Claims 1 through 10 have been cancelled.

Appellants' invention relates to a drive unit for a safety belt tensioner having improved sealing characteristics and increased performance with a simplified setup. Independent claims 11 and 20 are representative of the subject matter on appeal and a copy of

those claims can be found in the Appendix attached to appellants' brief.

The prior art references of record relied upon by the examiner in rejecting the appealed claims are:

Stephens et al. (Stephens)	2,889,163	Jun. 2, 1959
Mitzkus et al. (Mitzkus)	5,553,803	Sep. 10, 1996
Wier	6,250,720	Jun. 26, 2001

Claims 11 and 14 through 20 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Mitzkus in view of Wier.

Claims 12 and 13 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Mitzkus in view of Wier as applied to claim 11 above, and further in view of Stephens.

Rather than reiterate the examiner's commentary regarding the above-noted obviousness rejections and the conflicting viewpoints advanced by the examiner and appellants regarding the rejections, we make reference to the examiner's answer (mailed August 26, 2004) for the reasoning in support of the rejections, and to appellants' brief (filed May 5, 2004) and reply brief (filed October 18, 2004) for the arguments thereagainst.

OPINION

In reaching our decision in this appeal, we have given careful consideration to appellants' specification and claims, to the applied prior art references, and to the respective positions articulated by appellants and the examiner. As a consequence of our review, we have made the determination that the examiner's above-noted rejections under 35 U.S.C. § 103(a) will not be sustained. Our reasons follow.

The examiner's basic position concerning the rejection of claims 11 and 14 through 20 under 35 U.S.C. § 103(a) as being unpatentable over Mitzkus in view of Wier is set forth on pages 3 and 4 of the answer. Essentially, the examiner points out that Mitzkus discloses a safety belt tensioner drive unit (Figs. 1-4) including a drive shaft (19) coupled to a belt winding reel (12), a drive chamber formed by two connected plates (51, 52) which extend parallel to one another, drive bands (21) having ends fastened to the drive shaft and wound on the drive shaft, and a gas generator (at 16) responsive to an acceleration sensor (43), which upon actuation exposes the drive chamber and drive bands (21) to pressurized gas that cause the drive bands to unwind and drive the drive shaft in such a manner as to tension the safety belt (13). The examiner recognizes that the belt tensioner of Mitzkus does not

include or disclose a coating material on the facing sides of the plates as required in the claims on appeal.

The examiner looks to Wier (col. 6, lines 1-6) for a teaching of a coating (e.g., wax) used on a cable traction transfer means (11) of a safety belt tensioner unit to enhance sealing between the cable and an adjacent surface of a damping/sealing piston (37) through which the cable passes. In the examiner's view, it would have been obvious to one of ordinary skill in the art at the time of appellants' invention to provide Mitzkus with a coating material such as wax between the plates and the drive bands as taught by Wier to enhance gas retention in the drive chamber.

Like appellants (brief, pages 7-11 and reply brief), we find no suggestion or motivation supporting the examiner's proposed combination of Mitzkus and Wier. Mitzkus describes an arrangement wherein the width of the draw/drive belts (21) is "so large that they sealingly and slidingly contacts [sic] the end walls 51, 52 and thus subdivide the band running chambers 23 into two partial chambers 23', 23" sealed relative to one another via the draw bands 21" (col.7, lines 8-12). There is no indication in Mitzkus of any problem associated with the seal between the draw/drive belts (21) and the walls (51, 52) of the running chambers (23). To the contrary, Mitzkus specifically provides vent openings (37) to

prevent an excessive pressure build up in the partial chambers (23") on triggering of the additional drive via the pressure source (16), thereby evidencing that the seals of the belts (21) at the walls (51, 52) are more than adequate and do not need to be improved. See column 7, lines 23-27 of Mitzkus.

The belt tensioner of Wier differs markedly from that of Mitzkus. Wier's tensioner uses an axially movable traction transfer cable (11) to transfer a tensioning force to the safety belt upon actuation of the compressed gas source (17). The cable (11) passes through a deformable damping piston (37) situated at one end of piston/cylinder unit (3). As noted by appellants in their reply brief, Wier's teaching is limited to coating the traction cable (11) with wax or silicon to enhance its sealing ability with the sleeve-shaped section (43) of the damping piston (37) because the traction cable "does not have a smooth external surface" (col. 6, lines 1-6). No such problem is present in Mitzkus.

Since Mitzkus fails to evidence any problem with the seal therein, and since neither Mitzkus nor Wier teaches anything about coating plates that contact edges of a draw/drive belt, such as the flat belts (21) of Mitzkus, to reduce the amount of gas that escapes through an interface between the edges of the drive belts and the facing plate surfaces, we must agree with appellants that the

examiner has failed to meet his burden of establishing a prima facie case of obviousness. For that reason, we refuse to sustain the examiner's rejection of claims 11 and 14 through 20 under 35 U.S.C. § 103(a).

As further noted by appellants in their reply brief (page 2), even assuming arguendo, that Mitzkus and Wier could be properly combined, such a combination would not result in the invention set forth in the claims on appeal. Since Wier teaches coating the movable traction transfer cable (11), it would appear that, at best, the result of combining Wier and Mitzkus would be an arrangement like that of Mitzkus wherein the movable draw/drive belts (21) would be coated with wax or silicon to enhance sealing, instead of having a coating on the inner surface of each of the plates forming the band running chamber (23) as defined in the claims on appeal.

Regarding the examiner's rejection of claims 12 and 13 under 35 U.S.C. § 103(a) as being unpatentable over Mitzkus, Wier and Stephens, we have reviewed the added Stephens patent, but find that this patent directed to oil seals for rotary shafts does not overcome or otherwise cure the deficiencies in the basic combination of Mitzkus and Wier noted above. Thus, the rejection of dependent claims 12 and 13 under 35 U.S.C. § 103(a) will likewise not be sustained.

Since we have not sustained either of the rejections put forth by the examiner under 35 U.S.C. § 103(a), it follows that the decision of the examiner is reversed.

REVERSED

CHARLES E. FRANKFORT)
Administrative Patent Judge)
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TERRY J. OWENS) BOARD OF PATENT
Administrative Patent Judge) APPEALS
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